The Agricultural Situation

A Brief Summary of *Economic Conditions*

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United States Department of Agriculture

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THE Spring has been unusually cold and wet so far. Pastures have been held back and the feeding period lengthened, thus increasing the severity of the feed shortage in the drought areas. Spring work has been delayed over a wide area. Early fruits and vegetables have been nipped in a number of the Southern States.

Farm real estate values continued to rise in the year ending March 1 for the fourth straight year. The average value on March 1 was 4 percent greater than a year earlier and 16 percent above the low point of March 1, 1933. The West North Central States, hard-hit by drought, reported no increase in value in the last year. All other areas reported increases, with the greatest increase taking place in the South Atlantic States.

DEMAND: No Change in Sight

A survey and analysis of the general business situation indicate that there will be little change in the demand for farm products during

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the next few months. Industrial activity will probably continue at a relatively high level for at least several months, partly because of large backlogs of orders in many plants.

But a continuation of the rapid expansion which has characterized steel, automobiles, textiles, leather products, tobacco products, soft coal, and petroleum during recent months is unlikely. Many industries cannot continue to expand production without using obsolete equipment or in other ways increasing their costs. There's plenty of room for expansion in building, which has shown disappointingly small increases to date. Recent sharp rises in building costs will not help the situation.

World supply and demand conditions affecting American farm products which enter international trade continue favorable. Business activity in foreign countries is being maintained at high levels. But exports of farm products from this country continue far below pre-war or pre-depression years, because of smaller supplies and higher trade barriers.

FARM INCOME: Large Government Payments

March was a big month for cash income received by farmers. Not only did income from the sale of farm products increase 18 percent over the amount received in March 1936, but Government payments (111 million dollars) were the largest for any month since the beginning of the Agricultural Adjustment Administration, in 1933. The total increase in income over March 1936 was 36 percent.

Income from all major groups of farm products was higher in March than in March 1936. Sharp price rises for cattle and cotton, together with large marketings of these products, wheat, and hogs, were big factors in the increased income. Here are the figures:

	Income from farm marketings	Government payments	Total
March 1937	$596, 000, 000	$111, 000, 000	$707, 000, 000
March 1936	505, 000, 000	15, 000, 000	520, 000, 000
February 1937	505, 000, 000	52, 000, 000	557, 000, 000
February 1936	449, 000, 000	----------	449, 000, 000

FARM PRICES: Higher in March

The general level of prices received by farmers rose between March 15 and April 15. On April 15 prices were about the same as at the high point in January. Prices paid by farmers also rose from mid-March to mid-April. The ratio between prices farmers received and prices paid held steady at 97 percent of pre-war level, only 3 points below parity. During the first 4 months of 1937 prices received by farmers averaged close to parity.

Index Numbers of Prices Received and Paid by Farmers

[1910–14=100]

Year and month	Prices received	Prices paid	Buying power of farm products [1]
1936			
April	105	121	87
May	103	121	85
June	107	120	89
July	115	123	93
August	124	126	98
September	124	127	98
October	121	127	95
November	120	127	94
December	126	128	98
1937			
January	131	130	101
February	127	132	96
March	128	132	97
April	130	134	97

[1] Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by producers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and States.

Product	April average, 1910–14	April 1936	March 1937	April 1937	Parity price, April 1937
Cotton, lb.—cents	12. 4	11. 2	13. 5	13. 7	17. 0
Corn, bu.—do	63. 4	57. 2	105. 4	119. 1	88. 0
Wheat, bu.—do	89. 3	85. 4	123. 2	126. 6	121. 1
Hay, ton.—dollars	12. 16	7. 35	11. 98	12. 24	16. 26
Potatoes, bu.—cents	68. 8	81. 1	131. 3	120. 8	95. 6
Oats, bu.—do	40. 9	25. 4	52. 5	54. 6	54. 7
Soybeans, bu.—do	(1)	78. 3	151. 9	166. 1	
Beef cattle, cwt.—dollars	5. 50	6. 27	6. 76	6. 97	7. 14
Hogs, cwt.—do	7. 59	9. 38	9. 17	9. 04	9. 89
Chickens, lb.—cents	11. 8	16. 9	14. 4	15. 2	15. 6
Eggs, doz.—do	16. 6	16. 8	19. 9	20. 1	[2] 21. 4
Butter, lb.—do	25. 1	28. 3	30. 6	30. 3	[2] 34. 7
Butterfat, lb.—do	25. 9	31. 2	34. 9	33. 0	[2] 36. 1
Wool, lb.—do	18. 0	26. 2	31. 7	33. 2	24. 1
Veal calves, cwt.—dollars	6. 76	7. 57	8. 04	8. 05	9. 25
Lambs, cwt.—do	6. 46	8. 46	8. 83	9. 19	8. 04
Horses, each.—do	140. 40	101. 00	101. 50	100. 20	187. 10

[1] Prices not available. [2] Adjusted for seasonality.

COTTON: High Mill Consumption

Domestic cotton mills consumed 799,000 bales of cotton in March and more than 5 million bales in the 8 months ending with March. Both were the highest on record for those periods. Mill activity has also been at record high levels in foreign countries in recent weeks. Although domestic mill sales of goods were reported to be less than current output in late March and early April, unfilled orders are still large, indicating a continued high level of domestic activity.

Cotton prices responded to this record-breaking consumption by rising during March. In early April, however, they declined.

The Commodity Credit Corporation released more than 1.2 million bales of its loan-stock cotton between February 1 and April 22, leaving a total of less than 1.8 million bales of Government stocks.

Trade reports indicate that the quantity of fertilizer used in the Cotton Belt this season will be considerably larger than last year.

WHEAT: Toward a World Basis

American wheat prices, which have averaged far above their normal relationship to world prices in recent years, began to move toward an export basis in March. But, since world prices were rising, this adjustment—instead of bringing lower American prices—simply resulted in our prices rising less than prices in the Liverpool market. The prospect of a United States wheat crop well in excess of domestic requirements for consumption and carry-over was the reason for this adjustment of wheat prices toward a world basis.

After the first week in April, however, world prices dropped off, and instead of continuing to adjust, American prices dropped less than world prices.

World wheat markets have been extremely sensitive to changes in demand from importing countries during the past few months. World stocks are far below normal, and many European countries have been bidding up the price to replenish their supplies. A sudden decrease in this demand was partly responsible for the decline in prices in April.

Estimates of the 1937 acreage sown to winter wheat, representing about 70 percent of the total wheat acreage in the Northern Hemisphere (excluding Soviet Russia and China), indicate an increase of about 4 percent in winter wheat acreage. Most of this increase is in the United States. Prospects for the American winter wheat crop were boosted above earlier estimates on April 9, when the official forecast of 656 million bushels was announced. A later forecast, based on condition May 1, will be released May 10.

Whether the adjustment of American wheat prices to a world basis will mean lower prices for the 1937 crop than were received for the 1936 crop will depend upon what world prices do. If world production this year is well above average consumption, prices might be lower. But if heavy European buying and the rising level of commodity prices both continue, prices might not decline, even with a large crop.

FRUITS: Strong Citrus Prices

Prices of citrus fruits are expected to continue to move up during the remainder of the spring and to be relatively high throughout the summer months. Orange and lemon supplies are smaller than they were a year ago and smaller than the 1931–35 average. Grapefruit production was large in 1936 but marketings have been so heavy (55 percent greater than last year to date) that the remainder of the marketing season may see supplies not much greater than last year.

Strawberry prices ordinarily drop when shipments from Louisiana and Alabama begin in volume. Marketings from those States are delayed this spring and may overlap in May with marketings from the second-early States. Total production in the States which usu-

ally market their crop before the end of May (excluding Florida) is estimated to be 15 percent greater than last year's crop in those States.

POTATOES: Large Crop in Early States

Potato production in the early States is expected to be much larger than it was a year ago. The official forecast of production in Florida and the lower valley of Texas is 4.5 million bushels as against 2.8 million bushels harvested in 1936. No official forecast is available for the group of States just north of these, but estimated planted acreage and April 1 condition indicate a larger crop than last year's.

The time is near when potato prices usually begin to decline. The early crop in Alabama and Louisiana has been delayed by unfavorable weather and, because of heavy shipments of old potatoes in recent months, remaining supplies are believed to be small.

Shipments of new potatoes from Florida and Texas have moved out at a faster rate than at this time a year ago. It is believed that the movement is past the half-way mark from both States.

TRUCK CROPS: Marketings Delayed

Truck crops in the Southern States have been held back a week to 10 days by unfavorable growing conditions in March. As crops recover from these set-backs and as later-planted crops reach maturity, marketings of truck crops are expected to increase considerably. Prices of most vegetables ordinarily drop lower during May.

Production of spring crop snap beans in California, Florida, and Texas is expected to be 30 percent smaller than in 1936. Acreage of snap beans for harvest in these States plus the second-early States (Alabama, Georgia, Louisiana, Mississippi, and South Carolina) is estimated at 47,000 compared with 65,000 acres harvested last year. In the second-early States alone, however, a 10-percent increase in acreage is indicated.

Prospects are for plentiful supplies of cabbage in the next 6 weeks. Prices are expected to decline in May as usual when increased supplies become available.

Production of Bermuda and Creole onions in the early States is estimated at 2.3 million sacks, compared with 3.3 million sacks last year. Present conditions indicate that prices of Bermuda onions will range higher than those of a year ago but lower than in 1935.

Production of green peas in the second-early States is expected to be somewhat below last year's crop. Prices are expected to be higher than those received last year.

FEED GRAINS: Jump in Corn Prices

Corn prices rose sharply in late March and early April, the weekly average price of No. 3 Yellow at Chicago climbing to the highest level in more than 15 years. Oats prices made only slight advances, while barley prices were irregular with little net change. Total commercial and farm supplies of corn and oats on April 1 were about the same as on that date 2 years earlier, following the 1934 drought. They were only about half as large as average supplies on that date for the 5 years, 1929–33. Consumption of corn and oats in the first 3 months of the year was larger than it was 2 years ago.

Prices of feed grains will weaken during the next few months if crop conditions are favorable. Other factors making for lower prices are the greening up of spring pastures, which will provide additional feed, the weakening of demand from livestock feeders because of unfavorable feeding ratios, and expected increased shipments of new-crop Argentine corn.

Index Number of Prices Paid by Farmers for Feed

[1910-14=100]

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1936	94	94	94	93	95	94	114	134	136	132	133	137
1937	142	145	144	153	----	----	----	----	----	----	----	----

CATTLE: Higher Prices for the Better Grades

Farmers have received higher prices for the better grades of heavyweight cattle in late March and early April than in any similar period since 1930. Slaughter supplies have continued large in recent weeks, but the number and proportion of Good, Choice, and Prime grades has been unusually small.

The number of cattle on feed in the Corn Belt on April 1 was esimated to be 33 percent smaller than the number on feed a year earlier. Farmers reported that they intended to market a larger proportion of these cattle in April, May, and June than has been marketed in those months in other recent years. The continued shortage of grain-fed cattle in prospect indicates higher prices for these kinds in the late summer and fall than have been received this spring.

Though prices of the better grades of cattle have risen since June 1936, much the same as they did 2 years earlier, prices of the lower grades have advanced only slightly, in contrast to the sharp rise from December to April 1934–35. When farmers begin to market grass-fed cattle in volume in the early summer a decline in prices of the lower grades may be expected. The strong consumer demand for meats, together with the expected increase in demand for stockers and feeders if crop conditions are favorable, may make this decline less than usual.

HOGS: High Corn Prices

An important development in the hog situation in the past month was the sharp rise in corn prices which carried Chicago quotations to the highest level in more than 15 years. Consequences of this rise are that many farmers will sell off hogs now in feed lots earlier than they had planned. This will reduce the number of hogs available for marketing in May and early June when marketings usually increase.

Farmers will probably market fewer hogs between now and the end of the marketing year (Oct. 1) than they did during that period last year. But supplies of pork and lard in storage are so large that the total supply of hog products in that period will be larger than it was a year earlier. Even though supplies of hog products are larger hog prices are expected to average at least as high as, and perhaps higher than, they did in 1936, since consumer demand is expected to be stronger this year.

Prices of hogs have been fairly steady during the past 2 months. The average price of hogs at Chicago throughout most of this period has been slightly over $10 per 100 pounds. About the usual increase in hog prices is to be expected in July and August if crop conditions are normal this summer.

SHEEP: High Spring Lamb Prices

Little change in the outlook for lamb prices has occurred in the last month. Marketings of early spring lambs will be late from most areas, and prices will probably be maintained at or near the present level during May and June. Prices are now $1.50 to $2 above last year's prices. The drop in lamb prices which ordinarily occurs in early June will probably be later than usual this year. Fed lamb supplies are also expected to be smaller in the next 2 months than they were in those months last year. This decrease will be partly offset by an increase in marketings of grass-fat yearlings and wethers from Texas.

WOOL: Heavy Consumption

Wool prices have been higher in recent months than in any similar period since 1929. Little change in prices is expected during the next 2 or 3 months. Price changes in the latter part of 1937 are uncertain now but will depend mostly on demand from American woolen mills and on price changes in foreign markets after Southern Hemisphere wool starts to come to market in the fall.

Consumption of wool by American mills continues large and, on the basis of sales and unfilled orders, will probably maintain a fairly rapid pace for several months. It is possible, however, that the high activity in January and February may have been partly caused by early placing of orders at the expense of activity later in the year.

POULTRY: Egg Storage Up

During the first 3 months of 1937 farmers maintained egg production much greater than in the first 3 months of 1936, in spite of the high cost of feed in relation to egg prices. But on April 1 crop reporters indicated that their hens were producing at a lower rate than a year earlier. The larger number of hens in farm flocks, however, resulted in total production about the same as on April 1, 1936.

Egg prices have not declined as much as they usually do from February to April. The explanation is largely in stronger demand from storage operators. Eggs are going into storage at a rate about one-fifth greater than last year and at higher prices. Temporary price declines may occur during the spring but they are not likely to carry prices below those of 1936.

Because of the improvement in consumer demand, chicken prices have been rising slightly more than usual for this season, in spite of heavy marketings and large storage stocks.

DAIRY PRODUCTS: Butter Prices Drop

Butter prices were relatively steady from November to the end of March. But during early April they dropped sharply. Production of milk is expected to increase more than usual when cows are turned

on pasture this spring, so butter prices will probably continue to decline at faster than the usual rate for the season until late May or early June. Even though this drop occurs, butter prices during the summer will probably be higher than for any other summer in 6 years, with the possible exception of 1936, because of the generally higher level of commodity prices and stronger demand.

Milk production on April 1 was about 3 or 4 percent smaller than on that date a year earlier and except for 1935 was the lowest for that date since 1929. Feed costs have been so high in relation to prices of dairy products that many farmers have not been feeding their herds as well as they usually do in the off-pasture season.

Consumption of dairy products has been large in recent months. The out-of-storage movement of butter in March was heavy, and stocks on April 1 were about average in contrast with the unusually large stocks in the earlier months of the year.

RECENT AGRICULTURAL PUBLICATIONS

MARCH 1937

Farmers' Bulletins

1291F. Preparation of Fresh Tomatoes for Market.
1371F. Diseases and Insects of Garden Vegetables.
1483F. Control of Insect Pests in Stored Grain.
1763F. Harvesting and Handling Citrus Fruits in the Gulf States.
1769F. Dairy Cattle Judging.
1770F. High-Grade Timothy and Clover Hay: Methods of Producing, Baling, and Loading for Market.
1771F. Preventing Soil Blowing on the Southern Great Plains.

Miscellaneous Publications

228M. Market Diseases of Fruits and Vegetables: Peaches, Plums, Cherries, and Other Stone Fruits.
256M. Early Erosion-Control Practices in Virginia.
262M. A Graphic Summary of Farm Taxation.

These publications may be obtained by writing to the Office of Information, United States Department of Agriculture, Washington, D. C.

AGRICULTURE'S PART IN OUR DECLINING TRADE BALANCE

Statistics issued by the Department of Commerce on our international balance of payments indicate that in 1936, for the first time since the United States became a creditor country, imports of merchandise and services (tourist expenditures, immigrant remittances, etc.) exceeded exports by more than enough to provide foreigners with the dollar exchange necessary to pay the net interest and dividends on their debts to us. Total net imports of goods and services amounted to 507 million dollars in 1936, while the net interest payments made to the United States from abroad amounted to 375 million dollars.

The relatively large net importation of goods and services is accounted for, first, by an increase in the "invisible" imports, such as tourist expenditures and, second and more importantly, by a marked decrease in our "favorable" balance of merchandise trade. Between 1934 and 1936 the net invisible imports increased 156 million dollars, while the merchandise trade balance decreased 444 million dollars. The purpose of this article is to examine the part that agricultural exports and imports played in the decreased merchandise balance of trade.

Table I shows our exports and imports of merchandise divided between the agricultural and the nonagricultural items. With respect to the import figures, it should be pointed out that agricultural imports for the present purpose are considered to be only the imports of those products which are competitive directly or indirectly with domestic production. Other imports of an agricultural character, such as rubber and coffee, are of no more direct significance to American agriculture than imports of strictly nonagricultural products, such as minerals.

Table 1.—Foreign Trade of the United States (Agricultural and Nonagricultural)

Group	Million dollars				Percent of total			
	Average 1926–30	1934	1935	1936	1926–30	1934	1935	1936
Exports:								
Agricultural	1, 692	733	747	710	36. 1	34. 9	33. 3	29. 4
Nonagricultural	2, 996	1, 367	1, 495	1, 707	63. 9	65. 1	66. 7	70. 6
Total	4, 688	2, 100	2, 242	2, 417	100. 0	100. 0	100. 0	100. 0
Imports:								
Agricultural (competitive)	928	413	589	693	23. 0	25. 3	28. 9	28. 6
Other	3, 105	1, 223	1, 450	1, 728	77. 0	74. 7	71. 1	71. 4
Total	4, 033	1, 636	2, 039	2, 421	100. 0	100. 0	100. 0	100. 0

Table 1 shows that in the period 1926 to 1930 our agricultural exports comprised 36 percent and nonagricultural items 64 percent of

our total exports. In 1936, on the other hand, agricultural items constituted only a little more than 29 percent of our total exports. This is the smallest percentage of agricultural exports in the history of this country.

With respect to imports, it will be seen that in the period 1926 to 1930 "competitive" agricultural products constituted 23 percent of our total imports. In 1934, before the full effect of the drought of that year had made itself felt, competitive agricultural imports constituted 25 percent of the total. In 1936 the continuing effect of the drought of 1934 plus the effect of the drought of 1936 caused our competitive imports to rise to almost 29 percent of our total imports.

These facts suggest that changes in the agricultural segments of the trade played an important part in the reduction in our export balance of merchandise trade. It will accordingly be useful to examine some of the outstanding recent shifts in agricultural and nonagricultural exports and imports. The year 1934 is chosen for a comparison with 1936 because, while the trade in that calendar year was affected to some extent by the 1934 drought, it was less affected than the trade in 1935.

Table 2 gives a break-down of our export and import trade for the years 1934 and 1936. With regard to exports, it will be seen that the agricultural items showed a decline of 3 percent. On the other hand, the nonagricultural items showed an increase of 25 percent, so that total exports increased 15 percent between these 2 years. The decline in our agricultural exports is largely accounted for by a falling off in the value of the exports of animal products and grain. The reductions in these items and in cotton were more than enough to outweigh increased exports of tobacco and fruit. The marked decrease in exports of edible animal products (principally pork and lard) is readily explained by the extremely low corn crops of 1934 and 1936. The small wheat crops in 1934, 1935, and 1936 account chiefly for the reduction in the grain group.

Table 2.—Changes in United States Foreign Trade from 1934 to 1936

Item	1934	1936	Increase (+) or decrease (−)	
DOMESTIC EXPORTS	*Million dollars*	*Million dollars*	*Million dollars*	*Percent*
Total exports	2,100	2,418	+318	+15.1
Agricultural exports	733	709	−24	−3.3
Cotton	373	361	−12	−3.2
Tobacco, unmanufactured	125	137	+12	+9.6
Fruits and nuts	74	81	+7	+9.5
Vegetables and preparations	9	12	+3	+33.3
Animals and products, edible	70	46	−24	−34.3
Grains and preparations	39	30	−9	−23.1
Fodders and feeds	8	7	−1	−12.5
Other	35	35		0
Nonagricultural exports	1,367	1,709	+342	+25.0

Table 2.—Changes in United States Foreign Trade from 1934 to 1936—Continued

Item	1934	1936	Increase (+) or decrease (−)	
DOMESTIC EXPORTS—continued	*Million dollars*	*Million dollars*	*Million dollars*	*Percent*
Automobiles and other vehicles	217	279	+62	+28.6
Petroleum and products	228	261	+33	+14.5
Metals and manufactures, except machinery and vehicles	190	234	+44	+23.2
Industrial machinery	98	159	+61	+62.2
Chemicals and related products	93	117	+24	+25.8
Wood and paper	90	100	+10	+11.1
Electrical machinery and apparatus	67	91	+24	+35.8
Iron and steel semimanufactures	57	80	+23	+40.4
Nonferrous metals, except precious	68	76	+8	+11.8
Other	259	312	+53	+20.5
IMPORTS FOR CONSUMPTION				
Total imports	1,636	2,421	+785	+48.0
Agricultural imports (competitive)	413	693	+280	+67.8
Sugar	118	155	+37	+31.4
Vegetable oils (expressed) and oilseeds	58	122	+64	+110.3
Grains and preparations	33	84	+51	+154.5
Fruits and nuts	46	58	+12	+26.1
Hides and skins	35	54	+19	+54.3
Animals and products, edible	26	59	+33	+126.9
Tobacco, unmanufactured	25	30	+5	+20.0
Clothing and combing wool	7	30	+23	+328.6
Vegetables and preparations	16	20	+4	+25.0
Other	49	81	+32	+65.3
Other imports	1,223	1,728	+505	+41.3
Paper, paper manufactures, and paper base stocks	158	209	+51	+32.3
Cocoa, coffee, and tea	169	185	+16	+9.5
Crude rubber	102	159	+57	+55.9
Nonferrous metals, except precious	97	147	+50	+51.5
Nonmetallic mineral products	87	126	+39	+44.8
Raw silk	72	102	+30	+41.7
Furs and manufactures	41	82	+41	+100.0
Chemicals and related products	65	80	+15	+23.1
Cotton manufactures	28	42	+14	+50.0
Distilled spirits	36	64	+28	+77.8
Fish	23	30	+7	+30.4
Art works	16	26	+10	+62.5
Other	329	476	+147	+44.7

Nonagricultural exports showed an increase of 25 percent between 1934 and 1936. The outstanding gains in these exports were in automobiles and machinery of all kinds. These larger nonagricultural exports went primarily to non-European, nonindustrial countries and are explained largely by the marked improvement in economic conditions in these countries since 1934.

Referring again to table 2, it will be noted that between 1934 and 1936 total imports into the United States increased 48 percent. The

imports of competitive agricultural products rose 68 percent, while all other imports rose 41 percent. A large part of the "nonagricultural" imports consists of raw materials for American industry, and the expansion in these imports is, therefore, accounted for, in part, by the sharp rise in industrial production in this country and, in part, by higher prices.

Since sugar makes up about one-fourth of our total competitive agricultural imports and since the quantity of sugar imports is strictly limited by quota, it is desirable to see what has happened to competitive agricultural imports excluding sugar. Due to a rise in price the value of imports of sugar increased 31 percent between 1934 and 1936.

When sugar is subtracted from the total competitive agricultural imports the remaining competitive imports show an increase of over 82 percent. It is this particular segment of our import trade that is of special interest from the agricultural point of view.

The largest increases in the competitive imports occurred in vegetable oils and oilseeds, grains and preparations, and animals and animal products. Taken together these three groups of imports increased 148 million dollars, or 126 percent in 1936 over the corresponding imports for 1934. Most of the increase in imports may be accounted for by reduced supplies and high prices in this country, resulting from unfavorable weather conditions, particularly in 1934 and 1936. It should be noted that in the case of corn, for instance, the effect of the drought of 1934 was not reflected in imports until the calendar year 1935. On the other hand, in the case of the drought of 1936 imports of corn started to arrive in large volume as early as July.

The largest percentual increase in imports of agricultural products occurred in the case of combing and clothing wool. This particular increase is accounted for by the large expansion in the consumption of wool in the United States.

There remains, in conclusion, to evaluate in concrete terms the extent to which unfavorable weather conditions have influenced our exports and imports of agricultural products and consequently our merchandise balance of trade. Naturally such evaluation must involve a number of assumptions, but certain facts are fairly clear. It seems reasonable to assume, for instance, that with the larger supplies of pork and lard and wheat that would have been available with average corn and wheat crops in this country, there might have been little or no decline in exports of these products. In fact, an increase might have occurred. This seems particularly evident in view of considerable reductions in import restrictions in certain foreign countries resulting, in part, from reciprocal trade agreements with the United States. Assuming only that there would have been no decrease, our exports in 1936 would have been about 35 million dollars larger than they actually were.

On the other hand, with average weather, there would have been no need to import any wheat or corn and considerably less need to import feedstuffs other than corn. Imports of vegetable oils and animal products would probably have shown some increase but possibly less than half as much as they did. Miscellaneous imports, such as tapioca, butter, and dried milk, probably would have increased no more than half as much as they did. Under these assumptions our imports of competitive agricultural products would have been about 130 million dollars less in 1936.

An increase of 35 million dollars in exports and a decrease of 130 million dollars in imports makes a total difference of 165 million dollars in our balance of trade. Our export balance of trade actually declined 444 million dollars between 1934 and 1936. It may therefore be concluded that unusually poor growing conditions accounted for over one-third of the decline in the balance of merchandise trade in the last 2 years.

Other changes in agricultural trade not directly associated with poor growing conditions but caused chiefly by improved economic conditions in this country account for more than another third. A part of the increase in imports of vegetable oils and practically all of the increase in the imports of combing and clothing wool are in this category. Altogether the changes in agricultural trade—reduction in exports and expansion in imports—accounted for considerably more than two-thirds of the total reduction in the merchandise trade balance of the United States between 1934 and 1936. This is all the more significant when it is remembered that agricultural trade constitutes only about one-third of our total foreign trade.

L. A. WHEELER.

ECONOMIC INFORMATION FOR FARMERS

Economic information covering agriculture in the Nation was much less important years ago when our economic life was much less complicated. Then farmers were less dependent on prices, because they sold little and bought little. But those days are gone forever. Now agriculture is closely interwoven with the economic affairs of the Nation, with industrial production, with employment, and market demand. The result is that more information and a wider distribution of economic information is needed than ever before.

Agricultural programs and policies have been developed in recent years to meet serious, complicated farm problems. These must be based on facts and realities if they are to be successful. We have tried to do that.

But what may be a fact today may be changed quite completely within a few months. The absolutely accurate information of today may be tremendously misleading a few months hence. This is because there is nothing firm, fixed, or final in this world. We must continuously keep on our toes, noticing what is going on. Weather changes, human beings change, the condition of growing crops changes. It is necessary for the farmer to keep his mind open. It is necessary for him to notice change so as to keep step with changes in the outside world.

On many occasions recently in which I have visited farmers, I have been impressed by their ability to keep well informed. Part of this is due to the hardships through which we have passed in the last half dozen years. It is also because our public agencies are better equipped today to gather and make known their findings. I hope that we may continue to have improvement both in the quality of the economic information gathered and in the desire and willingness of farmers to make wise use of it. Only with information of this kind can farmers hope to build an effective economic democracy.

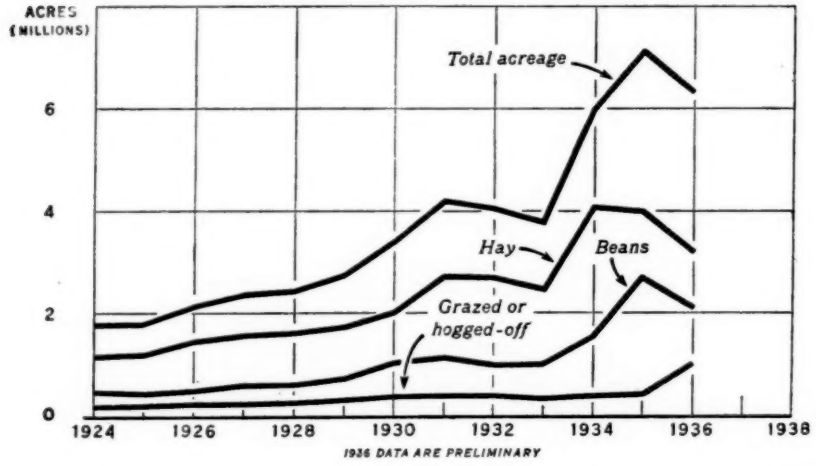
HENRY A. WALLACE.

THE SOYBEAN INVASION OF THE CORN BELT

The soybean is currently in undisputed first place in farm crop news value—has been for several years. Yet it ranks far down the list in both acreage and value. The interest in soybeans has been generated by a number of factors, but mainly by the tremendous increase in acreage grown for beans to be sold to crushing mills in the Corn Belt.

Strangely enough, it took the soybean nearly 100 years to become more than a botanical curiosity in this country. Introduced into the United States from Asia as early as 1804, the soybean was not recognized as having much value as a farm crop until the latter part of the nineteenth century. Since then it has become increasingly

SOYBEANS: ACREAGE FOR HAY, BEANS, GRAZED OR HOGGED-OFF, AND EQUIVALENT OF TOTAL SOLID ACREAGE, 1924 TO DATE



popular, and nearly all the State agricultural experiment stations have experimented with and published bulletins about soybeans.

Previous to 1917 soybean acreage was insignificant in this country. But increases have taken place nearly every year since the war and soybeans now rank as an important crop in many States. The chart provides a picture of the increase in acreage for various uses.

About one-fourth of the total soybean acreage was harvested for beans in 1924 and that proportion of the total was maintained until 1930. Since 1930 about one-third of the acreage has been harvested for beans.

During this period of increasing acreage and increasing use of the crop for beans, the average yield of beans per acre also increased. Because of the increase in acreage and yield, soybean production in 1935 was more than eight times production in 1924. Here are the figures for selected years:

	Acres harvested for beans	Average yield, bushels per acre	Total production, bushels
	Millions		*Millions*
1924	0.4	11.0	4.9
1930	1.0	13.4	13.5
1935	2.7	16.5	44.4
1936	2.1	14.0	29.6

As soybean production has increased, so also has the proportion of the crop crushed for industrial uses increased. While the quantity of beans saved on the farm for seed and feed has increased, it has not increased as rapidly as total production. The following tabulation shows the proportion and quantity of beans crushed:

	Percent of total crop	Bushels crushed
		Millions
1924	6	0.3
1930	30	4.1
1935	65	[1] 28.7
1936 [2]		

[1] Includes 3.5 million bushels exported to foreign mills. Domestic crushings in 1935 were 57 percent of the total crop. No soybeans from the 1924 or 1930 crops were exported. Slightly more than 2 million bushels were exported from the 1931 crop and about 2.5 million from the 1932 crop.
[2] Data incomplete.

The extremely rapid increase in soybean crushings has caused many farmers and others to look upon soybeans chiefly in light of their industrial possibilities. Scientists have discovered many new industrial uses for the beans—ranging from disinfectants to infant foods. But the chief importance of soybeans is still as a livestock feed—either in the form of hay, pasture, silage, or ground beans on the farm, or in the form of soybean cake and meal, resulting from the crushing process. More than half of the value of the beans which are crushed is represented by the value of soybean cake and meal.

Soybean oil is an important vegetable oil. It has considerable use as an edible oil for human consumption. During 1935 nearly 70 percent of the soybean oil consumed in the United States went into compounds, vegetable shortenings, and other uses as human food. In 1936 the proportion had increased to about 80 percent. But even at that, the use of soybean oil as human food is limited. It develops an undesirable flavor upon standing for a short period, and, though this has been corrected to some extent, it still presents a hindrance to use of the oil for this purpose. Soybean oil can also be used to advantage in paints when mixed with an oil of higher drying qualities, such as linseed, perilla, or tung. But it is still of secondary importance compared with other fats and oils for both food and nonfood uses.

Many products have been developed from soybean meal and cake, including glue, celluloid substitutes, plastics, and so on. But their use has not become extensive as yet. Soybean meal and cake still find their greatest outlet in the high-protein stock-feed trade.

Most of the increase in soybean acreage has been in the Corn Belt States where the crop is harvested for beans more than in other areas.

And much of the increase may be credited to the increased demand for soybeans for crushing. A large part of the increase has come in recent years when the Nation's cotton crop has been greatly reduced and supplies of cottonseed oil and cake have been small. To some extent, also, the increase in soybean production may be explained by the shortage of lard, resulting in high prices for vegetable shortenings.

In the last few years an extremely important factor in the increase in soybean production has been the fact that soybeans are fairly drought-resistant. In many cases farmers were able to plant soybeans after drought had started and other crops had failed, and thus obtain much-needed forage for livestock. The relative immunity of the crop to attacks by the chinch bug also played a part in the increase. So some of the increase in soybean acreage has been of an emergency nature.

All of which means that the soybean—like other crops—has its limitations. It has many virtues, not least of which is its versatility on the farm. It fits into the farm plan in many areas, having about as wide climatic adaptability as corn. It can be used in many different ways as a feed on the farm, or the beans can be sold as a cash crop.

But there is no reason at present for believing that the outlet for soybeans in industrial uses will expand considerably in the next few years. New industrial products in which soybeans are used may be developed, but this in itself does not open up new markets. Any expansion that occurs must be in competition with other oilseed products. It would be unfair to farmers, to scientists who are attempting to develop new uses for soybeans, and to the manufacturers themselves to assume that soybean growers can continue to expect an ever-expanding market.

LAUREN K. SOTH.

FARM SECURITY [1]

II—Stability of Farm Prices and Incomes

The present generation of farmers has gone through a period of extremely uncertain and variable prices and incomes. First the World War with its tremendous inflation of commodity prices—then the long post-war period of deflation intensified by the world-wide depression beginning in 1929 which sent farm prices to even lower levels. Now, after 4 years in which farm prices have improved and farm income has advanced at the rate of a billion dollars a year, farmers are looking into the future determined to do whatever can be done to prevent such disastrous fluctuations in the future.

Farmers today realize that they are part of a great, complex economic system—that their business affairs extend beyond their own fence rows, their county and State lines, even beyond the borders of the country. They realize that the problem of economic stability is not just a farm problem—nor yet just an industrial problem. It is not a problem of Texas alone, nor of New Jersey alone. Economic stability can be achieved only through the joint efforts of farmers and city people.

Farmers have learned that one of the biggest factors in farm stability is industrial stability. During the depression they were witness to a very sharp decrease in industrial production and relatively stable industrial prices, while, at the same time, their production was main-

[1] This is the second of a series on farm security.

tained at high levels and their prices crashed to all-time lows. Now farmers produce potatoes, cotton, hogs, and fruit to be exchanged for clothing, housing, automobiles, and furniture. When the production of industrial products is decreased and the production of farm products is maintained at the same level, it means that farmers get fewer industrial products in exchange for each unit of farm production. So, one of the big farm problems in the future—one of the big problems of economic stability and security for farmers—is to maintain a steady flow of industrial products from the factories and mines of the Nation. Reduction of farm production is effective in improving farm well-being during time of depression, as has been shown in recent years. But the benefits from achieving a balance in this way are limited. After a certain point has been reached, further improvement in farmers' well-being must come through expanding industrial production.

Though agricultural production as a whole is fairly steady, year in and year out, each year one or more areas or crops are severely damaged by weather, insects, or other natural disaster. One of the objectives of farm security should be to iron out the economic effects of such variations. The business life of the world has for years turned upon the principle of insurance against unpredictable disasters. Is there any sound reason why the business of farming should not make use of the joint method of covering risks? Sound crop insurance for farmers is one of the essentials to farm security.

Hand in hand with crop insurance, some method of ironing out great fluctuations in supplies of individual crops must be worked out. The crop insurance plan recommended to the Congress by the President's Crop Insurance Committee would help to stabilize our supplies of wheat, because premiums and indemnities would be paid in kind. During good crop years premiums would exceed indemnities and a reserve supply of wheat would be built up. During poor crop years this reserve supply would be paid back to farmers.

Another step toward this goal of stability could be made through a program of commodity loans. The usefulness of such a program has already been shown through the corn loans. Such loans make possible a balancing of the harvests between good and poor crop years. To maintain an ever-normal granary over a period of years farmers would have to have the power of controlling their production. The Farm Board failed in its efforts to stabilize supplies and prices because it lacked this power. After supplies had been adequately built up in the granary it might be desirable to run the farm plant at slightly under top capacity for a year or two—to prevent a repetition of the burdensome surpluses of 1932 and 1933.

And on this matter of farm incomes, we should always keep firmly in mind the truism that we can have a higher standard of living by specializing on those things to which we, our soil, and our climate are best fitted. We must continually work toward breaking down the barriers to world trade, to permitting a free flow of commerce between the countries of the world. Much of the agriculture of the United States has been built up on a world-trade basis. We prosper most when our farmers are producing abundantly for a world market and when we buy freely from other countries.

A. G. BLACK.

THE FARMER'S SHARE OF THE CONSUMER'S FOOD DOLLAR INCREASED IN 1936 [1]

The farmer received a larger proportion of the total amount spent by the consumer for food in 1936 than he did in 1935. This was the fourth consecutive year that the farmer's share of the consumer's food dollar increased.

In the 5 years from 1925 to 1929 the farmer received about 47½ cents out of each dollar spent by the average workingman's family for 58 standard foods. The farmer's share dropped to 33 cents in 1932, increased to 35 cents in 1933, to 37 cents in 1934, to 42 cents in 1935, and to 44 cents in 1936. In the first 3 months of 1937 the farmer's share has been increased to 47 cents. This is about equal to the 1925–29 level but considerably below the share received from 1913 to 1920.

The increase in the farmer's share of the consumer's food dollar during the past few years is the result of rising prices. His share always increases when prices are moving up and always decreases when prices are going down. The farmer is like the boy on the end in a game of crack-the-whip—changes in his prices are more violent than changes at the other end. The reason is that marketing, processing, and distributing charges change only slowly and moderately, so when retail prices go down the proportion taken by middlemen increases and the proportion taken by farmers decreases. The opposite is true when retail prices rise.

From 1935 to 1936 the retail value of the 58 standard foods increased 3 percent, while the farm value increased 10 percent. The margin going to pay middlemen's charges dropped about 2 percent. (Actually, the costs of processing, transportation, and marketing increased about 4 percent between these 2 years. But this increase was more than offset by the elimination of Government processing taxes, which were paid on a few of these foods in 1935, so that the total margin between the consumer and the producer decreased.)

Costs of processing, transportation, and marketing have increased since the middle of 1933 but at a much slower rate than either retail or farm prices. Changes in these middlemen's charges seem to be closely related to changes in hourly wages. This relationship has held during the last 20 years.

The farmer's share varies, of course, for different foods, running over 65 cents out of each dollar for products which require little processing, servicing, or handling, and as low as a dime for some canned vegetables, where processing is an important part of the total cost to the consumer.

No attempt has been made to subdivide the margins into their several components. This study of margins is being continued, however, and is being directed toward a more complete analysis of what proportions of the margins go into transportation, processing, and distribution and toward breaking down each of these into the proportions going into wages, rents, and other costs.

F. V. Waugh and R. O. Been.

[1] Leaflet No. 123, The Farmer's Share of the Consumer's Food Dollar, presents data for the years 1913 to 1935. Data for individual commodities are available in a mimeographed release, Price Spreads Between the Farmer and the Consumer, published in April 1937.

PARITY INCOME FROM FARM PRODUCTION

The article, Income Parity for Agriculture, which appeared in the Agricultural Situation for February 1936, indicated "a first broad approximation as to the level of income parity" based on data then available, chiefly in the form of income from farm production and the national income of the nonfarm population. In view of the shortcomings in current data on total income and cost of living of individuals living on farms and elsewhere referred to in last year's article, a considerable amount of research has been launched (see Agricultural Situation, April 1937, p. 16) and much additional data gathered. Since only part of the results of this investigation are expected by the end of this year, it is pertinent to examine again the parity-income situation, using such data on net income from farm production available for family living and income of the nonfarm population available for family living, as are now available.

The essential data for this comparison are given in the following tabulation. The first column contains Department of Agriculture estimates of gross farm income from production for the pre-war period, for 1919, 1921, 1925, and for the years 1929–36, inclusive. Gross income from 1936 production is estimated at $9,050,000,000, and including benefit payments, at $9,530,000,000. This series is in process of being revised and eventually will be supplemented by estimates of income received by persons on farms from nonfarm sources. The second column contains estimates of selected production expenditures. These cover expenditures for feed, seed, fertilizer, harness and saddlery, machinery operation, depreciation of machinery and buildings, ginning costs, rents to nonfarmers, short-term interest, and 90 percent of property taxes and mortgage interest, the other 10 percent being assumed as part of income available for living costs. This list is somewhat broader than the one used in last year's analysis.

Table 1.—Farm and Nonfarm Income Available for Living

	Gross farm income from production	Selected farm business expenditures	Farm income available for living	Nonfarm national income available for living	Population	
					Farm	Nonfarm
	Million	*Million*	*Million*	*Million*	*Thousand*	*Thousand*
1910–14	$6,760	$2,242	$4,518	$24,959	32,105	62,268
1919	16,935	5,337	11,598	47,368	31,730	72,566
1921	8,927	4,600	4,327	48,463	31,703	75,672
1925	11,968	4,817	7,151	63,978	31,064	82,971
1929	11,941	5,219	6,722	71,609	30,257	90,437
1930	9,454	4,732	4,722	66,830	30,169	92,328
1931	6,968	3,961	3,007	57,048	30,497	93,190
1932	5,337	3,480	1,857	44,877	30,971	93,608
1933	6,128	3,383	2,745	41,617	31,693	93,694
1934	6,681	3,460	3,221	46,422	31,770	94,464
1935	8,010	3,580	4,430	49,359	31,801	95,351
1936	9,050	3,725	5,325	55,877	31,809	96,215
Including benefits:						
1933	6,406	----	3,023	----	----	----
1934	7,276	----	3,816	----	----	----
1935	8,508	----	4,928	----	----	----
1936	9,530	----	5,805	----	----	----

The total net income available for farm family living is given in the third column. It represents what farmers have available, after deducting production costs, for the purchase of food, clothing, rent, household goods, transportation, education, miscellaneous living costs, and savings. The comparable data for the nonfarm population is given in column 4. These estimates of nonfarm national income available for living expenditures are derived from the estimates of national income (from the production of goods and services) as estimated by the National Bureau of Economic Research for the years prior to 1929, and from the estimates of income paid out to individuals prepared by the United States Department of Commerce for the years 1929 to 1935. The 1936 estimates represent a preliminary extension of the latter series by the Department of Agriculture. They include receipts of individuals as distinguished from businesses, in the form of wages and salaries, dividends, interest, and net rents and royalties. They do not include incomes of individuals derived from agricultural sources. These nonfarm income estimates are also in process of revision, but, though subject to several qualifications, may be used tentatively as the best series now available to represent income of the nonfarm population available for family living.

In the last two columns in table 1 are given the estimates of farm and nonfarm population. Like the income estimates, these population data are subject to modification. It is, for example, conceivable that persons living on farms, for the purposes of measuring parity income, may need to be defined as persons gainfully occupied in agricultural production.

Table 2.—Farm and Nonfarm Income Available for Living—Continued

[Index numbers, 1910–14=100]

	Per capita income available for living		Ratio farm to nonfarm
	Farm	Nonfarm	
1910–14	100. 0	100. 0	100. 0
1919	259. 7	163. 0	159. 3
1921	97. 0	159. 9	60. 7
1925	163. 6	192. 6	84. 9
1929	157. 9	197. 7	79. 9
1930	111. 2	180. 8	61. 5
1931	70. 1	152. 9	45. 8
1932	42. 6	119. 7	35. 6
1933	61. 5	110. 9	55. 5
1934	72. 0	122. 7	58. 7
1935	99. 0	129. 3	76. 6
1936	118. 9	145. 0	82. 0
Including benefits:			
1933	67. 8	----------	61. 1
1934	85. 3	----------	69. 5
1935	110. 1	----------	85. 2
1936	129. 7	----------	89. 4

By computing the per capita income available for living for the farm and nonfarm population from the data in table 1 and expressing the results as percentages of their respective pre-war averages, we obtain the comparison shown in table 2. In 1936 nonfarm per capita income averaged 145 percent of the 1910–14 average, compared with a low level of 111 in 1933 and with 198 in 1929. Farm income per capita, excluding benefit payments, averaged 119 percent of the pre-war level

in 1936, 43 percent in 1932 and 158 percent in 1929. Benefit payments raised the 1936 farm income figure to 130 percent.

At this point the definition of parity income would call for converting these estimates of relative income into their respective purchasing power when exchanged for the goods and services that farmers and nonfarmers usually purchase; but adequate and comparable living costs are not available. The Department of Agriculture index of prices paid by farmers for commodities, which averaged 124 percent of the pre-war level in 1936, does not include certain important items of living costs, such as rent and education, and is subject to other technical qualifications. Similarly, the Bureau of Labor index of costs of living which in 1936 averaged 143 percent of the pre-war level does not include expenditures for automobiles, and represents living costs of industrial workers, not of the total nonfarm population. While in the previous article these two indexes were used as measures respectively of farm and nonfarm living costs, it is now generally believed that the differences between them, amounting to a spread of 15 percent in 1936, do not represent the actual differences between the relative living costs for the total farm and the total nonfarm population. This view is partly supported by the fact that the cost of living indexes of the Bureau of Labor Statistics for cities contiguous to farm areas are relatively as high as the index for other cities and therefore about 15 percent higher than the index of prices paid by farmers for commodities. If changes since the pre-war period in farm and city living costs may thus be assumed for the present to be approximately equal, then farm income from production per capita available for living in 1936 was 82 percent of pre-war parity, and including benefit payments 89 percent. These ratios are given in column 3 of table 2. In dollar terms, the 82 percent in 1936 represented a "disparity" of about $1,170,000,000, of which $480,000,000 was made up by benefit payments.

L. H. Bean.

EXPORTS AND FOREIGN DEMAND

The volume of exports of agricultural products has declined continuously since 1927, with the exception of a temporary upturn in 1932. This decline is shown in the accompanying chart. It is probable that the volume of exports has about reached its low point, and will increase somewhat if crop conditions are more nearly normal during the next few years than they have been since 1933. However, a return to the volume of predepression years is not likely in the near future.

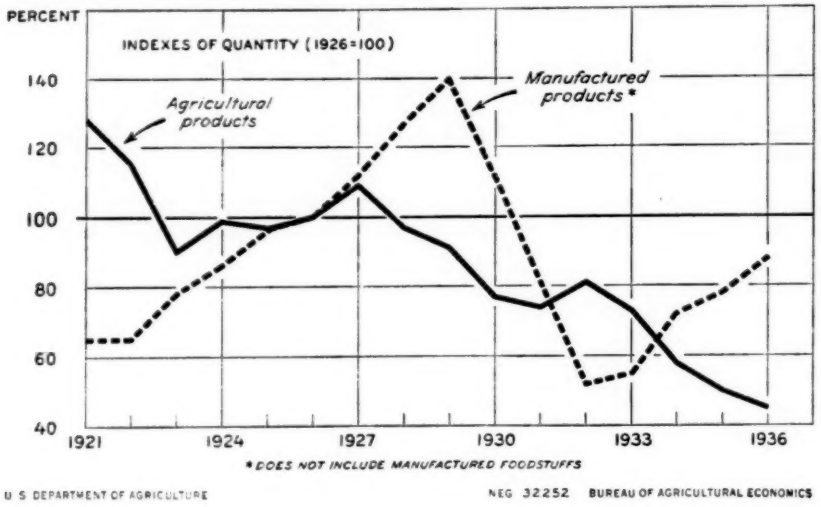
Exports of farm products from this country frequently are accepted as a rough measure of foreign demand. Consequently, the impression has spread among farmers and others interested in agriculture that the foreign demand for farm products has not improved materially since 1933, and that most of the recovery in farm prices which has occurred as a result of changes in demand has come from improvement in domestic conditions. In view of the difficulties encountered in the removal of international trade barriers, it is also frequently concluded that there is little possibility of material improvement in foreign demand, as it affects the prices of American farm products, for some time to come.

Examination of the facts, however, indicates that these conclusions are only partially justified. Changes in the volume of exports are not a satisfactory measure of changes in foreign demand, just as changes in

domestic consumption taken alone do not constitute a good indication of changes in domestic demand. In both cases allowances must be made for changes in the prices at which goods go into consumption. Improvement in foreign demand conditions, which has been marked since 1933, has been an important factor in raising the general level or average of farm product prices in the United States, despite the continued decline in exports.

Even though a product is not exported in any volume, or if it is imported, foreign demand conditions may be extremely important. The essential point is whether or not the commodity enters into international trade. For example, domestic wheat prices have been tied very closely to world wheat prices during the past year, even though we have temporarily ceased to export appreciable quantities of wheat. The world price, plus or minus costs of importing or exporting, respectively, constitutes a ceiling or floor above or below which domestic prices cannot go for any considerable period of time. Changes in world prices, which are influenced by conditions in this country as

EXPORTS OF AGRICULTURAL AND MANUFACTURED PRODUCTS



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well as in other countries, have played a very important part in the general rise in domestic wheat prices since 1933.

Similarly, the price of wool is greatly influenced by foreign demand and supply conditions, even though we do not export wool. Since 1932, both domestic and foreign wool prices have advanced greatly, with the rise in domestic prices being greater than that in foreign prices. From the low point in July 1932 to March 1937, the price of territory wool 56's at Boston rose from 30.2 cents per pound to 95.7 cents per pound scoured basis, an increase of about 215 percent. During the same time the price of a similar grade of wool at London rose from 20.5 cents to 47.8 cents, an increase of 150 percent. It seems probable that the greater rise in Boston as compared with London was due largely to developments in the United States. But a large part of the increase was due to changes in foreign supply and demand conditions, of which the general increase in foreign business activity, consumer purchasing power, and other factors affecting foreign demand were important elements.

Similar general principles apply in the case of cotton, flax, and other important farm products produced in the United States. The degree of importance of foreign demand conditions in the determination of prices of these various commodities, however, varies greatly. For example, although hog products enter international trade, special conditions applying to this product indicate that very little of the rise in price of hogs in this country since 1933 can be attributed directly to foreign conditions.

Changes in foreign business or demand conditions also influence prices of American farm products indirectly, through their influence on domestic business activity and consumer purchasing power in general. The accompanying chart shows the material increase in exports of manufactured products from the United States which has occurred since 1932. These increases, due in part to the improvement in foreign demand, have added to the volume of industrial production, employment, and purchasing power in the United States, and therefore to the domestic demand for farm products.

Summarizing: It is evident that (1) the influence of foreign conditions on the prices of American farm products is much more important than the volume of exports in recent years might indicate; (2) future changes in foreign demand will not necessarily be reflected in corresponding changes in export outlets for American farm products measured in terms of volume; and (3) it is still important for American agriculture to follow closely changes in foreign demand and supply conditions, even though we may in the future depend to a relatively small extent upon foreign markets for the utilization of agricultural commodities produced in this country.

F. L. THOMSEN.

INCREASED WHEAT STORAGE AT COUNTRY POINTS

Some facts: In the last 10 years the wheat-storage capacity of Enid, Okla., has grown from about 200,000 bushels of obsolete storage elevator capacity to more than 11 million bushels of mostly fast, modern, well-constructed, concrete storage. Considerable new storage space has been built at Oklahoma City, Shawnee, Yukon, El Reno, and several other Oklahoma towns. Storage space in Fort Worth, Tex., has increased 200 percent in the last 10 years. Dallas, Tex., has also increased its storage capacity. Two 2 million-bushel units have recently been built at Amarillo, Tex. Plainview and Lubbock, Tex., have increased their wheat storage space greatly. Dighton, Fowler, Minneola, Meade, Ulysses, Cimarron, Plains, Greensburg, Copeland, Salina, Hutchinson, and Wichita, Kans., have all increased their storage capacity in recent years with modern facilities.

A movement toward constructing modern wheat-storage space has been spreading in the great hard-winter-wheat area of the Southwest. A large portion of this new storage has been built at country points and subterminal points out in the growing sections. But in spite of all this storage which has been built at country and subterminal points, new storage has also been built at terminal points, particularly at Kansas City and Omaha.

These facts point to the conclusion that perhaps less wheat is being stored on farms and that certainly more is being stored at concentration points in the producing areas. In addition, the terminal markets are probably storing smaller proportions of the total.

An important factor in this increased use of public storage rather than farm storage is the increased use of the combine harvester. Much less grain is stored unthreshed on the farms in bundle stacks and headed-grain stacks. In addition, the grain which is harvested by combine is sometimes in such condition that it cannot be safely stored where it cannot be handled mechanically.

Another factor contributing to increased storage at country points is the desire of millers for virgin, country-run wheat. There is greater opportunity for blending wheats at terminal and subterminal markets where most elevators are equipped for such mixing. One particular type of blending is to mix very low test weight wheat of high protein content with low-protein, heavy-test wheat. Millers do not like such a mixture even though it may meet the Federal standards. As a result in many instances mill buyers are offering more for wheat at modern country elevators than at terminal or subterminal points.

The United States Warehouse Act, through its system of licensing, bonding, and supervision has made practical and safe the financing of grain at country points. Before the advent of the Federal Warehouse Act, farmers were not disposed to store their grain at many country points, because frequently when they desired delivery there was not sufficient grain in the warehouse to satisfy all outstanding warehouse receipts. Farmers many times were not given a genuine warehouse receipt which bound the elevator man to delivery of the grain upon demand but only a so-called elevator ticket. This was good only in proportion as the warehouseman was honest and had assets to make good his obligations. In other words, the depositor of grain frequently became a creditor in common with all other creditors of the warehouseman. The licensing of country elevators by the Secretary of Agriculture under the Federal Warehouse Act gives assurance to growers that their grain is in the elevator and will remain there until the warehouse receipt is returned. With this assurance there has been a growing tendency on the part of growers to store their grain in country elevators. Such elevators, when properly equipped, financed, and manned so that the Department can recognize them, prevent congestion of the grain at a few centers, preserve the identity of good country-run grain, permit the farmer to ship to the best markets, hold the farmer's wheat on the track so that he can sell at any time he desires, and afford adequate facilities for caring for the grain at all times.

In addition, when licensed under the Federal law the farmer is furnished a warehouse receipt that will enable him to borrow at practically any bank on reasonable terms.

This has encouraged the building of larger elevators and the holding of grain at primary delivery points with no funds tied up in freight, and with the grain free to move to the most desirable markets at the farmer's pleasure without penalty of accrued freight or handling costs.

This increased building of wheat storage space at country points is especially significant now in view of the pending legislation for wheat crop insurance. Under the proposed legislation premiums might be paid in wheat, and indemnities likewise might be paid in wheat. In good crop years, a storage supply of wheat would be built up which would be paid back to producers in time of crop failure. Thus the need for adequate and properly supervised storage of grain at country points.

ROBERT WALDIE.

DOMESTIC COTTON UTILIZATION EXPANDS

Mill consumption of cotton in the United States for the first 8 months of the 1936–37 season was about a third larger than for the same period last season. And it was more than a tenth larger than the previous peak season of 1926–27.

The unusually high current rate of domestic mill consumption has exceeded by far the material increase in the rate of general industrial production in the United States so far this season. Moreover, despite the unusually large output of cotton yarn and cloth, stocks of these goods in mill warehouses have decreased and unfilled orders for cloth are reported to be substantially larger than on the corresponding date in any other recent year. Thus, the current situation is favorable, although cloth sales by mills have fallen below output since mid-March 1937. The extent to which cotton goods have accumulated in channels of distribution and in the hands of consumers is not known, but it is not reasonable to suppose that ultimate consumers have actually used up finished material as fast as cotton yarn and cloth have been spun and woven. Domestic mill consumption in the 8 months ended with March 1937 amounted to about 5.3 million bales, against 4.1 million in the same period last season and 4.7 million in the previous peak year, 1926–27.

As is generally known, cotton textiles constitute one of the principal manufacturing industries in this country and the domestic market is the major individual outlet for American cotton. Thus, some of the outstanding characteristics of cotton utilization in the United States which are sometimes overlooked seem worth reviewing: First, despite the expansion of cotton consumption in Japan and other foreign countries, more cotton is consumed in mills in the United States than in any other country. Second, although new industrial uses are being sought and found for American cotton and efforts are being made to more adequately clothe large groups of people, the per capita consumption of cotton in this country is probably about double that for any other major country. Third, even with the substantial increase in rayon production in recent years and the large quantities of wool, silk, linen, jute, and other textile fibers used, the utilization of cotton in the United States exceeds that of all other textile fibers combined. Fourth, although 50 years ago only one-fifth of the cotton spun was consumed in mills located in cotton-growing States, now more than four-fifths of the total domestic mill consumption of cotton takes place in these States. This shift of the industry from New England to the South was made under the stimulus of lower manufacturing costs in the cotton States. Fifth, labor and capital costs constitute important elements in the cost of cotton textiles. The price of unfinished woven cloth has been comprised in recent years, on the average, of a little more than half raw cotton costs and half labor costs, capital costs, and profits. The proportion of costs other than raw cotton is greatly increased before the finished material reaches consumers in the form of overalls, house dresses, work shirts, cotton bags, or fabrics for use in automobile tires.

RODNEY WHITAKER.

BYPRODUCT OF A QUESTIONNAIRE

The Bureau of Agricultural Economics is now tabulating 12,534 schedules mailed in by farmers who have given the necessary items of information required to make the annual farm population estimates for 1937. Slightly more than 2,000, or 17 percent, of the farmers who filled out these schedules sent letters or comments directed to the Secretary of Agriculture or the Chief of the Bureau.

In 1933, about 23 percent of the schedules had such letters or comments. The comments received in 1937 carry an expression of optimism which was completely absent from the 1933 replies. There has been a marked recovery not only in farm incomes but in farm spirits.

In 1933, most farmers were vitally interested in the depression. A number of them declared that "revolution" was at hand, that "if things do not change we will change to highjacking and bank robbing" and that the "farmer will lose his patience this year if some relief does not come in some form or another." About 34 percent of all comments (not relating to population) received in 1933 convey the connotation of economic distress. In contrast, less than 10 percent of the comments on the 1937 schedules indicate economic distress. No farmer mentions revolution in the 1937 reports.

In 1933, 9 percent of the comments mentioned the Government. Most of these pleaded for the Government to do something. A typical one: "Nero fiddled while Rome burned—history is repeating itself." The most prominent request was for a moratorium on debts and lower interest rates. In 1937, 8 percent of the comments involve the Government. More than three times as many comments are favorable to the programs of the Agricultural Adjustment Administration as are opposed to these programs.

A trend toward big farm operations was frequently reported in this year's schedules for Nebraska, Kansas, Texas, Iowa, Oklahoma, and Illinois. One comment says, "The fellow with power machinery gets all the land and thus a lot of farmers are displaced and must go on relief." No such concern about big farm operations was indicated in 1933.

In 1933, a frequent comment was that "city people should stay put" and not move out to rural areas where they become a burden on local charity. In 1937, such comments are negligible.

CHARLES P. LOOMIS.

ESTIMATING WOOL YIELDS

Wool as it is shorn from the sheep, in addition to the usable wool content, contains grease, dust, sand, and vegetable and other foreign matter which, except with grease, is of no commercial value. The grease is a byproduct and is of value only after it is recovered and processed principally as lanolin.

Before the usable wool can be made available for manufacturing purposes it must be separated from the foreign matter. The weight of the clean, usable wool content of grease wool is called "yield", while that of the wastes in foreign matter is called "shrinkage."

Some wools shrink as little as 25 percent, others as much as 75 percent or more, and there are variations between these extremes. The yields in clean wool content vary inversely with the shrinkage. The

shrinkage or yield variations are somewhat restricted when considered in connection with grade and length. Nevertheless it is obvious that even within the grades there are material variations in the yields and shrinkages of grease wool which result in corresponding variations in the price per pound of grease wool, although the clean wool (yield) price remains the same. For instance, when wool is quotable at $1 per pound clean basis, grease wool yielding 25 percent clean wool is worth 25 cents per pound, while wool yielding 75 percent clean wool is worth 75 cents per pound in the grease.

When grease wool is offered for sale no one knows exactly what it will yield or shrink or how much it is worth on the market but careful estimates are attempted on the basis of which trading is conducted. These estimates more often than not are guesses and generally are favorable to the shrewder in the deal. While wool buyers have become quite proficient as estimators of shrinkage or yield, even their estimates often are subject to debate and controversy. In the final consummation of the deals, compromises are the rule and these are influenced by the strength of competitive demand and supply at the time. Generally, however, the seller is not wholly happy over the results.

This situation has resulted in demands for fundamental changes in the methods of marketing, for the services of an unbiased agency to determine the shrinkage or yield, the value and fair market price for grease wool as offered for sale, and for research by the Government that will establish a practical basis on which the doubtful questions that arise in selling wool may be solved with reasonable assurance of fairness to all concerned.

In response to the latter demand, the Bureau of Agricultural Economics has undertaken a research program which extends from the shearing sheds in producing areas, through the experimental laboratories of several States and of the Bureau, to the wool scouring processes of the manufacturers. In this research program it is hoped to discover a reliable method of determining yield or shrinkage of grease wool at time of shearing, at warehouses, or when offered for sale. If the program is successful the results should enable the wool grower, his agents, and wool buyers to arrive at a reliable approximation of the wool content of fleeces and of their market prices and values per pound according to condition and grade.

Wool research workers will attend the shearing operations in wool producing areas, appraise the shrinkage of the grades and of the clips and select typical samples which will be tested in the laboratories of the cooperating State colleges and in the Bureau's laboratory in Washington. In addition, when possible, typical lots will be followed to the scouring plants of manufacturers and yield or shrinkage data will be collected. The results will be carefully checked and analyzed in an effort to perfect a practical method of determining yields or shrinkages and values by careful examination and appraisal of the fleeces.

C. V. WHALIN.

Rural Electrification Increase

More than 25,000 miles of rural electric lines were constructed in 1936, according to the Rural Electrification Administration. About 110,000 farms were provided with electric service for the first time through these new lines. This was the largest increase for any year in the history of the United States.

THE RELATION OF CONSUMER INCOMES TO FARM INCOME FROM LIVESTOCK

It is frequently asserted and usually accepted that the price of livestock is determined by the supply of and demand for livestock. This statement, however, is only partially true, if the term demand is used to mean consumer demand, since important factors affecting the price paid for livestock are the charges for processing and distribution of livestock products. In more common parlance, these charges for processing and distribution are referred to as the spread between producer and consumer, or middlemen's margins.

Most consumers have no demand or desire for live hogs, live cattle, or live lambs. Rather their demand is for sirloin steaks, chuck roasts, sliced bacon, pork chops, and leg of lamb to mention only a few products derived from meat animals. The charges for converting live animals into these and other products affect prices of livestock as well as the supply of and the demand for meats and other livestock products.

In general, it appears that prices which consumers pay for meat are determined by their incomes and the supply of meat available for consumption. Preliminary studies indicate that changes in total expenditures by consumers for meat are closely associated with changes in the aggregate income of consumers. This close relationship for the period 1924–36 is indicated in figure 1. An adequate index of consumer income over a long period of years is not now available, but the preliminary estimates of national income, excluding income from agriculture, prepared by the Agricultural Adjustment Administration, provide a rough measure of changes in incomes of consumers of farm products during the post-war period.[1] These estimates were used in figure 1.

Likewise, there is some relationship between changes in national income excluding agriculture, and changes in the income from marketings of meat animals as is also indicated in figure 1. This relationship, however, is not so close as that for consumer expenditures for meats and national income. From 1929 to 1932 consumer expenditures for federally inspected meats and lard declined about 40 percent. National income declined about 37 percent. The income from farm marketings of livestock, however, was reduced by more than 60 percent in this period.

That the decrease in farm income from meat animals from 1929 to 1932 was much greater than that in consumer expenditures for meat is not surprising in view of the relative stability of distribution and processing charges. These charges were not reduced nearly so much as were consumer expenditures for meats in the period mentioned above. Hence, the residual remaining for producers of meat animals, after such charges were deducted from the total consumer expenditures for meats, was reduced relatively much more than were consumer expenditures or national income. The greater reduction in farm income from meat animals than in consumer expenditures for meats also was due partly to the sharp decrease in foreign demand for United States pork and lard.

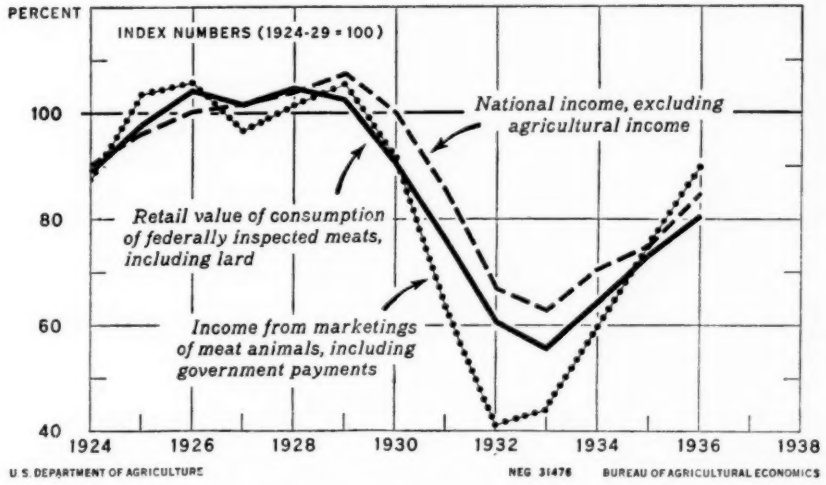
With the improvement in business conditions and the increase in incomes of consumers generally since 1932, the situation has been greatly different from that prevailing during the early depression years.

[1] See National Income and Domestic Demand for Farm Products, by L. H. Bean, in the Agricultural Situation, April 1936.

From 1933 to 1936 consumer expenditures for federally inspected meats and lard increased about 44 percent.

National income, excluding agricultural income, increased nearly 35 percent in this period, but farm income for meat animals was about doubled. The much greater increase in farm income than in consumer expenditures was due partly to the decrease in slaughter supplies of livestock, but it was due largely to the fact that the increase in charges for processing and distribution of livestock products was much less than the increase in consumer expenditures for meats. Thus, the residual remaining for livestock producers, after deduction of such charges from the aggregate spendings of consumers for meat, was increased relatively more than consumer expenditures.

RETAIL VALUE OF MEATS, NATIONAL INCOME, AND FARM INCOME FROM MEAT ANIMALS



In the next few years if further increases in national income occur, as some observers have predicted, it is likely that increases also will occur in consumer expenditures for meats and in farm income from livestock. It is not likely, however, that farm income from livestock will continue to increase at a more rapid rate than consumer expenditures for meats or national income. It is possible that the gain in farm income will be less rapid.

In the last several months there have been material increases in wage rates in many industries. Since wages, either directly or indirectly, are the most important factor in processing and distribution charges, the relative increase in such charges probably will be as great as and perhaps greater than the increase in incomes of consumers generally. Although these recent increases in wage rates have been reflected in increased incomes of consumers, changes in wage rates are not necessarily closely related to changes in consumer income. The increase in incomes of consumers since 1933 has resulted not only from increased wage rates, but also from greater employment and other factors.

Reports indicate that the recent increase in wages in the packing industry has brought wage rates in a considerable part of that industry to a level higher than that prevailing in 1929, the last predepression

year. Such increases in packing house wages and in wages in the retail trade along with recent increases in rents will add materially to the costs of distribution and processing of livestock products. Only insofar as these increases are accompanied by an increase in the aggregate incomes of consumers is it probable that there will be more money available for retail purchases of meats. On the other hand, the rise in wages and rents will bring about an increase in the spread between prices received by producers of livestock and prices received by consumers of meats. Consequently, it seems probable that the proportion of the total consumer expenditures for meats available for payments to producers for livestock will be reduced, even though the total of such payments continues to increase.

PRESTON RICHARDS.

Farm Co-ops

There were 10,500 farm marketing and purchasing associations in operation during the 1935–36 marketing season, reports the Farm Credit Administration. These co-ops had 3,660,000 members and did a business of $1,840,000,000.

Sixty-nine percent of these associations were located in the 12 North Central States. Minnesota, with 1,401 associations, led all other States. Wisconsin was second with 1,086, and Iowa third with 954.

Grain and Dairy Co-ops Most Important

Of the 10,500 farmers' cooperative marketing and buying organizations which were active in the 1935–36 marketing year, 29 percent were engaged in handling grain (including rice and dry beans). Dairy coops made up 22 percent of the total; fruits and vegetables, 10 percent; and livestock, 10 percent.

Twenty percent of the associations were purchasing organizations. In addition, 2,360 of the marketing associations engaged partly in buying supplies for members.

CASH INCOME FROM THE SALE OF FARM PRODUCTS AND GOVERNMENT PAYMENTS TO FARMERS

[Million dollars]

	Grains	Cotton and cottonseed	Fruits and vegetables	All crops	Meat animals	Dairy products	Poultry and eggs	All livestock and products	Total crops and livestock	Government payments	Total income
1936											
Jan.	41	53	54	201	191	112	41	349	550	1	551
Feb.	31	32	68	161	145	103	36	288	449	----	449
Mar.	46	23	80	179	154	115	52	326	505	15	520
Apr.	37	14	85	159	159	113	56	334	493	37	530
May	42	19	104	191	148	126	64	350	541	59	600
June	55	16	108	206	165	130	59	381	587	57	644
July	163	12	108	327	171	130	49	383	710	24	734
Aug.	117	27	78	284	168	125	46	351	635	11	646
Sept.	71	159	86	406	174	120	43	346	752	6	758
Oct.	70	220	103	510	198	121	44	372	882	22	904
Nov.	67	146	80	367	201	109	62	382	749	19	768
Dec.	68	99	68	321	222	113	65	404	725	36	761
1937											
Jan.	59	52	78	279	193	115	46	359	638	43	681
Feb.	47	39	86	211	154	103	34	294	505	52	557
Mar.	53	39	109	237	173	123	56	359	596	111	707

NONFARM INCOME UP IN MARCH

All the measures of domestic demand shown in the accompanying tabulation, except construction contracts awarded, improved in March. Factory employment and pay rolls advanced substantially, after correction for seasonal variation, despite suspension of automobile production during the last 23 days of the month at several automobile and accessory factories. Nonagricultural income per capita increased further in March and was about 9 percent greater than it was a year earlier. Improvement in domestic demand in March was accompanied by a substantial increase in farm income (see p. 2).

The March gain in factory employment carried the index above the 1924–29 average for the first time in the current recovery period. The gain in pay rolls restored wages per factory worker to the highest point since June 1930. Per capita factory pay rolls in March would exchange for 14 percent more of the items which make up the living budget of the urban worker than during the 1924–29 period.

Measures of Domestic Demand

[1924–29=100]

	March				Percent change		
	1929	1933	1936	1937	1936–37	1933–37	1929–37
National income (excluding farm income):							
Total	106.2	58.2	81.6	89.5	+10	+54	−16
Per capita	101.6	54.2	75.0	81.6	+9	+51	−20
Factory pay rolls:							
Total	106.3	36.1	73.9	96.3	+30	+167	−9
Per employed wage earner	101.9	58.7	84.2	95.4	+13	+63	−6
Industrial production:							
Total	110.1	55.1	86.8	111.0	+28	+101	+1
Factories processing farm products	105.8	82.7	97.2	115.0	+18	+39	+8
Other factory production	115.3	39.1	82.4	106.0	+29	+171	−8
Construction activity:							
Contracts awarded, total	100.0	11.6	38.8	45.5	+17	+292	−54
Contracts awarded, residential	90.4	7.2	23.3	40.3	+73	+460	−55
Employment in production of building materials	95.5	32.1	51.2	65.3	+28	+103	−32
Cost of living:							
Food	97.9	57.7	76.3	82.3	+8	+43	−16
"All other items"	98.4	80.3	81.9	84.0	+3	+5	−15
Purchasing power of national income (excluding farm income) per capita:							
For food	103.8	93.9	98.3	99.1	+1	+6	−5
For "All other items"	103.3	67.5	91.6	97.1	+6	+44	−6

NOTE.—All indexes adjusted for seasonal variation except "Cost of living."

Both the groups of factories processing farm products and those using nonagricultural raw materials increased output in March. The former group is considerably more active now than in 1929.

Living costs continued to rise in March at about the same rate as in February. About one-half the rise was attributable to higher food prices as in the preceding month and as in the year 1936 as a whole.

P. H. BOLLINGER.

Highest Farm Wages in 6 Years

Farm hands are getting the highest spring wages in 6 years. Wages have increased 9 percent since the first of the year and are 12 percent above pre-war. A shortage of farm labor has been reported east of the Mississippi and a surplus west of the river. Monthly wages averaged $23.38 with board and $34.16 without board on April 1, according to reports from crop correspondents.

GENERAL TREND OF PRICES AND WAGES

[1910–14=100]

Year and month	Wholesale prices of all commodities [1]	Industrial wages [2]	Prices paid by farmers for commodities used in [3]—			Farm wages	Taxes [4]
			Living	Production	Living production		
1920	225	222	222	174	201	239	209
1921	142	203	161	141	152	150	223
1922	141	197	156	139	149	146	224
1923	147	214	160	141	152	166	228
1924	143	218	159	143	152	166	228
1925	151	223	164	147	157	168	232
1926	146	229	162	146	155	171	232
1927	139	231	159	145	153	170	238
1928	141	232	160	148	155	169	239
1929	139	236	158	147	153	170	241
1930	126	226	148	140	145	152	238
1931	107	207	126	122	124	116	217
1932	95	178	108	107	107	86	188
1933	96	171	109	108	109	80	161
1934	109	182	122	125	123	90	153
1935	117	191	124	126	125	98	[5] 154
1936	118	199	122	126	124	107	----------
1936							
April	116	195	----------	----------	121	101	----------
May	115	195	----------	----------	121	----------	----------
June	116	196	121	120	120	----------	----------
July	118	198	----------	----------	123	108	----------
August	119	202	----------	----------	126	----------	----------
September	119	198	123	132	127	----------	----------
October	119	202	----------	----------	127	110	----------
November	120	201	----------	----------	127	----------	----------
December	123	211	124	133	128	----------	----------
1937							
January	125	209	----------	----------	130	103	----------
February	126	211	----------	----------	132	----------	----------
March	128	218	127	139	132	----------	----------

Year and month	Index numbers of farm prices [August 1909–July 1914=100]								Ratio of prices received to prices paid
	Grains	Cotton and cottonseed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1920	232	248	191	--------	174	198	223	211	105
1921	112	101	157	--------	109	156	162	125	82
1922	106	156	174	--------	114	143	141	132	89
1923	113	216	137	--------	107	159	146	142	93
1924	129	212	125	150	110	149	149	143	94
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	153	149	96
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	104	68	95	89	90	73
1935	103	101	91	127	118	108	117	108	86
1936	108	100	100	113	121	119	115	114	92
1936									
May	88	96	103	105	118	106	101	103	85
June	87	96	115	99	120	106	103	107	89
July	109	105	117	115	119	116	106	115	93
August	129	103	108	134	123	125	112	124	98
September	130	106	105	153	123	128	119	124	98
October	128	104	104	131	120	125	127	121	95
November	127	103	97	104	118	126	141	120	94
December	134	105	93	99	122	127	133	126	98
1937									
January	143	107	105	115	128	128	110	131	101
February	146	108	127	143	126	126	101	127	96
March	145	116	133	131	129	125	102	128	97
April	154	117	142	127	130	120	104	130	97

[1] Bureau of Labor Statistics Index with 1926=100, divided by its 1910–14 average of 68.5.

[2] Average weekly earnings, New York State factories. June 1914=100.

[3] These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

[4] Index of farm real estate taxes, per acre, 1913=100.

[5] Preliminary.

U. S. GOVERNMENT PRINTING OFFICE: 1937